

DOCTORAL THESIS

**A Culture-Oriented Framework for BPR
Implementation: The Case Study of Saudi Arabia**

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2012

Submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy (Engineering and IT)

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CERTIFICATE OF AUTHORSHIP/ORIGINALITY

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in this research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of Candidate

A handwritten signature in blue ink, appearing to read 'G. G. G.', is written over a horizontal line.

Date: 15/4 2012.

Acknowledgments

First and foremost, I thank Almighty God for granting me strength, wisdom and guidance. Without His grace and mercy, I would not have been able to complete this study.

I wish to express my sincere appreciation to my supervisor, Dr. Zenon Chaczko, for his scholastic guidance, valuable advice and constant support throughout the period of my candidature. I would like to thank my co-supervisor, Dr. David Davis for his valuable advice and comments throughout the period of my study. Also, I would like to thank to A/Prof Johnson Agbinya, Dr Perez Moses, Prof Tom Anderson, Mr John Dartnell as well as Mr Chris Chiu and Mr Joe Chong for all their help and assistance.

I would like to express my gratitude to my mother, Rasheedah Shakir, and the spirit of my father, Abdulqadir Al-Rahali (Allah's mercy), who gave me their unconditional support from miles away and patiently anticipated successful completion of my study. To repay the debt of the parents is impossible; it is even truer for me.

All my love goes to my wife, Dr Narjes Ibrahim Deqnah. I cherish her love, care, understanding, patience and constant support. Her unwavering encouragement has meant so much during my candidature. I would also like to thank my four daughters Hadil, Wejdan, Muwdah and Malaak, who have been a source of constant joy and inspiration for me.

There are a number of people who have helped me during the course of the research; however, it is impossible to record all of them here. I hope that they accept my sincere

thanks and appreciation. I find myself, however, deeply indebted to several people and will mention their names here.

My special thanks and appreciation go to King of Saudi Arabia, King Abdullah Bin Abdulaziz, and to my government for granting me a scholarship to carry on my higher studies and in return I am so grateful for their help, supports and concern during my studies.

Furthermore, I would like to express my thanks and appreciation to my brothers Abdulfattah, Tariq, Talat and my sisters Wajanaat and Manaal for their support and encouragement. My thanks are also due to my father and mother-in-law, brothers- and sisters-in-law.

Finally, I am also grateful to all my colleagues for their help, support and friendship.

شكر و عرفان وامتنان



قال الله تعالى ((قُلْ هَلْ يَسْتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ)) الزمر: 9

وقال الله تعالى ((يَرْفَعُ اللَّهُ الَّذِينَ آمَنُوا مِنْكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِيرٌ)) المجادلة: 11

قال رسول الله صلى الله عليه وسلم يقول: ((من سلك طريقاً يلتمس فيه علماً سهل الله له طريقاً إلى الجنة ، وإن الملائكة لتضع أجنحتها لطالب العلم رضى بما يصنع ، وإن العالم ليسقف له من في السماوات ومن في الأرض، حتى الحيثان في الماء ، وفضل العالم على العابد كفضل القمر على سائر الكواكب ، وإن العلماء ورثة الأنبياء ، وإن الأنبياء لم يورثوا ديناراً ولا درهماً، وإنما ورثوا العلم، فمن أخذه أخذ بحظ وافر ..)) رواه أبو داود و الترمذي

جزيل الشكر والحمد والثناء والعرفان والسجود لله خالقي العزيز القدير الذي ألهمني وتفضل علينا وامتن علينا والذي لولا توفيقه ورحمته ما كنت قادراً علي إكمال مشواري البحثي وإتمام دراستي العلمية .

الشكر لله ثم إلي والدنا خادم الحرمين الشريفين الملك عبدالله بن عبدالعزيز آل سعود ملك المملكة العربية السعودية وولي عهده الأمين صاحب السمو الملكي الأمير نايف بن عبدالعزيز آل سعود حفظهم الله وحفظ بلدنا ووطننا الحبيب بعطائهم ودعمهم المتواصل و الشكر موصول لحكومة المملكة التي أمدتني بعطائها المعنوي والمادي الذي دعمني طوال فترة دراستي وعلمي .

أجمل كلمات ومعاني الشكر والعرفان أكنها نحو والدي الشيخ عبد القادر مهدي رحالي (رحمه الله) والذي كان له الفضل بعد الله في دعمنا وتزويدنا نحو العلم والتعلم والتربية و الفضل والشكر لوالدتي العزيزة السيدة المصونة رشيدة بنت عبدالفتاح شاكراً والذي كان لها الفضل والامتنان بالدعاء بعد الله والصبر المتواصل والحكمة والدعم المعنوي والالذان الهماني بالدعم المستمر

بالرغم من بعد المسافات وأنا في غربتي حتى تفضل الله علينا بهذا العمل والانجاز أدعو الله أن يساعدني علي أن أوفي بحقهما طيلة حياتهم ويمد في حياتها بالخير والسعادة والإيمان اللهم أمين ...

كل الحب والتقدير أقدمه لزوجتي الدكتورة : نرجس بنت إبراهيم دقنه , اقدر لها حبها , و اهتمامها و تفهمها , و تسامحها وصبرها و دعمها المتواصل وتشجيعها والذي كان له الأثر الكبير طوال فترة دراستي فلها كل الشكر والحب والتقدير وشكري وتقديري لأخواتي جميعهم : الأخ الكبير محمد (رحمة الله عليه) وخالد و شقيقتي الكبرى الأستاذة الفاضلة شفاء (رحمة الله عليها) و أخي وشقيقي وموجهي الأكبر الأستاذ عبد الفتاح و أخي الدكتور طارق و أخي المهندس طلعت وأختي العزيزتين وجنات ومنال لحبهم وتشجيعهم لي بالحب والتقدير لهم جميعاً .

الشكر والتقدير الجزيل لمشرفي الدراسي العزيز البروفسور الدكتور زينون شاكركو لوقوفه بجانبني و إرشاده لي بالنصائح وتعاونونه معي طوال فترة دراستي , كما أتقدم بالشكر الجزيل لمساعد المشرف د. ديفيد ديفيس لنصائحه القيمة وار شادتهم ونصحائهم المستمرة

ولا أنسي تقديم جزيل الشكر لطيور الجنة وعصافير بيتي بناتي الأعراف الذين رافقوني طيلة فترة الدراسة والتحصيل العلمي الذي وهبني الله أيامهم وملأكتني الصغار اللواتي كن مصدر السعادة و المرح والتشجيع المتواصل بالنسبة لي طيلة دراستي وحياتي الأنسات : هديل و وجدان ومودة وملك

وأخيراً كل الحب والشكر والامتنان لكلا من : جميع أعضاء سفارة وملحقه خادم الحرمين الشريفين سفارة المملكة العربية السعودية في استراليا على دعمهم اللامحدود وتشجيعهم لنا والشكر موصول لكل الأصدقاء ولكل الأعراف و الزملاء في جامعة سيدني للتكنولوجيا لمساعدتهم وتشجيعهم لي والشكر موصول لكلا من وقف بجانبني بالدعاء وبأجمل كلمات التشجيع علي مدي فترة دراستي من الصعب حصر أسمائهم ولكن أن يتقبلوا شكري الحار وتقديري .

والحمد لله رب العالمين...

الباحث

1433هـ - 2012م

Table of Contents

List of Figures	viii
List of Tables	x
Abstract	xi
Abbreviations	xii
Chapter 1: Introduction.....	1
1.1 Background	2
1.1.1 Importance of BPR	3
1.1.2 BPR in the Kingdom of Saudi Arabia: A Case Study	4
1.2 Motivation	5
1.3 Research Challenges	6
1.4 The Research Objectives and Scope	7
1.5 Significance and Contributions	8
1.6 Research Methodology	9
1.7 Structure of the Thesis	11
Chapter 2: Background and Related Work.....	13
2.1 Introduction	14
2.2 Business Process Re-engineering.....	14
2.3 Challenges of Implementing BPR.....	15
2.4 Function vs Process-Oriented Organisations	17
2.5 Differences between BPR and Total Quality Management (TQM).....	18
2.6 Organisational Culture	19
2.7 National Culture	20
2.8 Organisational Culture Changes	21
2.9 Culture Change	23
2.10 Emergence and stabilization of cultural differences among nations.....	23
2.11 Business Process Re-engineering and Information Technology (IT)	25
2.12 The Cultural Impact on the Success of BPR Initiatives.....	28
2.13 Adopting BPR Principles in the Kingdom of Saudi Arabia.....	30
2.13.1 The Kingdom of Saudi Arabia: An Overview.....	30
2.13.2 BPR Implementation in the Manufacturing and Industrial Sectors in KSA	32
2.13.3 The Cultural Impact on the Adoption of BPR Principles in KSA.....	33
2.14 Summary and Conclusion	34
Chapter 3: Models, Frameworks and BPR Related Methodologies.....	35
3.1 Introduction	36
3.2 BPR Methodologies	36
3.3 Modelling Concepts	42
3.3.1 Holonic Modelling.....	42
3.3.1.1 Background	42
3.3.1.2 Holonic Modelling Method.....	46
3.3.1.3 Holonic Manufacturing System	46
3.3.1.4 Summary	50
3.3.2 Teleonic Modelling.....	50
3.3.2.1 Overview	50
3.3.2.2 Culture as a Stigmergic Teleon	53
3.3.2.3 Advantages and Disadvantages of Teleonic Model	54

3.3.3	Brahms Model.....	55
3.3.3.1	Overview	55
3.3.3.2	Advantages and Disadvantages.....	57
3.3.4	Cognitive Modelling.....	57
3.3.5	Six Sigma.....	59
3.3.5.1	Overview	59
3.3.5.2	DMAIC methodology	62
3.3.5.3	Advantages and Disadvantages.....	63
3.3.6	Zachman Framework for Enterprise Architecture	63
3.3.6.1	Overview	63
3.3.6.2	Zachman Framework for BPR	65
3.4	Discussion	66
3.5	The need for a New Framework.....	73
Chapter 4:	A Qualitative Study of BPR Status in the Kingdom of Saudi Arabia (KSA).....	76
4.1	Introduction	76
4.2	Survey I	78
4.2.1	Configuration and sample size.....	78
4.2.2	Results of Survey 1	86
4.3	Survey II.....	95
4.3.1	Sample and Context.....	95
4.3.2	About the Questionnaire	96
4.3.3	Results of Survey II	98
4.4	Survey III	109
4.5	Data Analysis	112
4.6	Discussion and Conclusion	114
Chapter 5:	A Culture-Oriented Framework for BPR Application.....	117
5.1	Background	118
5.2	A Culture-Oriented Holonic Framework for BPR Implementation.....	120
5.2.1	Overview.....	121
5.2.2	Modelling of existing business processes	122
5.2.3	Management restructuring	123
5.2.4	Enhancing product quality	124
5.2.5	Producing the re-engineered/new process model	124
5.2.6	The Holonic Agent Layer	124
5.3	The Supplier Management Process: A Case Study.....	125
5.4	Limitations of the Framework.....	130
5.5	Summary and Conclusion	130
Chapter 6:	Evaluation of the Proposed Framework.....	132
6.1	Introduction	132
6.2	The Simulation Environment	134
6.3	Experimental Scenarios: The Supplier Management Process.....	137
6.4	The Simulation Implementation.....	140
6.5	The Simulation Results	144
6.5.1	Results of Scenario 1	146
6.5.2	Results of Scenario 2	149
6.6	Summary and Conclusion	151
Chapter 7:	Summary and Conclusion.....	152
7.1	Research Status, Methodologies and Findings.....	152
7.1.1	BPR in the Kingdom of Saudi Arabia	153
7.1.2	The Research Methodology	154

7.1.3 A Culture-Oriented Framework for BPR implementation 155

7.2 Contribution and Significant of This Research..... 156

7.3 Limitations and Future Work 157

Appendix 1: Surveys 160

Appendix 2: Experimental Datasets..... 191

Appendix 3: Methods, Models and Frameworks 196

References 197

List of Figures

Figure 1-1: Research Methodology.....	10
Figure 2-1 Function vs process views of an enterprise. Source: [32]	17
Figure 2-2: The Emergence and Stabilisation of Culture Patterns Source: [60].....	25
Figure 3-1. The relationship between BPR, BPM, modelling framework and culture. [1, 4]	39
Figure 3-2. Agent and Holon symbolic representation and an example of the concrete	45
Figure 3-3: Basic structure of Holonic Manufacturing System.	48
Figure 3-4: Generic model of Teleonic process with the corresponding Teleonic terms. Source: Adapted from [120].	52
Figure 3-5: Hierarchy to cognitive modelling [126].	58
Figure 3-6: Six sigma statistics [135, 136].	61
Figure 4-1: Education level of participant	79
Figure 4-2: Number of male participants in each industry	82
Figure 4-3: Number of female managers, employees and consumers in each industry..	82
Figure 4-4 : Number of respondents from different profession	83
Figure 4-5: Nationalities of respondents	85
Figure 4-6: Responses to the general questions	87
Figure 4-7: Total number of responses for the specific questions by consumers, employees and managers.....	89
Figure 4-8: Consumers' understanding of the specific questions	90
Figure 4-9: Employees' understanding of the specific questions	93
Figure 4-10: Managers' understanding of the specific questions	94
Figure 4-11: Number and percentage of respondents by position and nationality	100
Figure 4-12: Number and percentages of respondents by profession and nationality..	101
Figure 4-13: Number and percentages of respondents by company type	102
Figure 4-14: Responses to Questions 1, 2 and 16	105
Figure 4-15: Responses to Questions	109
Figure 4-16: Responses to all questions	111
Figure 4-17 : The Relationship between Culture Profiles and BPR improvements	113
Figure 5-1. Major Components in Business Process Improvement.....	118
Figure 5-2. Culture-Oriented Framework for BPR implementation.....	121
Figure 5-3. The Proposed BPR Simulation Process adapted from [1].....	123
Figure 5-4. A holonic business process adapted from the paper [1].....	126
Figure 5-5. The original supplier management process (Source: Siemens-Saudi Arabia[2, 3])	128
Figure 5-6. The Re-engineered supplier selection and evaluation processes guided by the developed framework.....	129
Figure 6-1. Functional Model of Service Holarchy	134
Figure 6-2. System Classes and Holon Service	140
Figure 6-3. UML Classes	141
Figure 6-4. A snapshot of the simulation source code	142
Figure 6-5. Partial source code of the simulation	142
Figure 6-6. Anylogic Workspace in 2D View	143
Figure 6-7. The service tasks variations during the working hours	145
Figure 6-8. Statistical Analysis of Tasks Accomplished	145
Figure 6-9. Resource Consumption vs number of tasks.....	147
Figure 6-10 Delays vs number of tasks	147

Figure 6-12. Effects of Holonic Agent Population towards System Process Throughput 148

Figure 6-11. Throughput vs number of tasks 148

Figure 6-13: Error Rate of Processes (with and without BPR)..... 150

List of Tables

Table 2-1: Major differences between TQM and BPR (Source: adopted from [34])	18
Table 3-1: The Zachman Architectural Framework [143]	64
Table 4-1: Survey distribution methods	78
Table 4-2: Education level and industry roles of participants.....	79
Table 4-3: Gender of managers, employees and consumers across industry types	81
Table 4-4: Number of respondents from different professions	83
Table 4-5: Nationalities of respondents	85
Table 4-6: Responses to the general questions	87
Table 4-7: Total number of responses for questions by consumers, employees & managers	89
Table 4-8: Consumers’ understanding of the specific questions	91
Table 4-9: Employees’ understanding of the specific questions.....	92
Table 4-10: Managers’ understanding of the specific questions.....	93
Table 4-11: Number and percentage of respondents by position and nationality	99
Table 4-12: Number and percentage of respondents by profession and nationality.	101
Table 4-13: Number and percentage of respondents by company type	103
Table 4-14: Responses to questions	108
Table 4-15: Questions differed among different groups	110
Table 4-16: Analysis of surveys questions	112
Table 4-17: The value for each parameter	113
Table 6-1: Major parameters used in this simulation.....	139
Table 6-2: Task Loads of Various Service Rates.....	144
Table 6-3: Error Occurrences.....	150

Abstract

The Kingdom of Saudi Arabia has a promising well-resourced economy with one of the highest growth rates among the Gulf region countries. The government of Saudi Arabia is targeting sustainable industrial growth through effective reengineering of industrial management using modern techniques, technologies and through building new industrial cities. However this country is still not well-advanced industrially and technologically compared to developed countries. This research utilises the Kingdom of Saudi Arabia (KSA) as a case study and explores culture-related adoption factors of Business Process Reengineering (BPR), or Alhendrah (Arabic for BPR) as it is known in Saudi Arabia, with a principal focus on the manufacturing industry in KSA. A combination of quantitative and qualitative methods was used, and an extensive literature review was undertaken in order to highlight major issues involved in the research problem. As a result, three web-based surveys were carried out as well as online interviews with selected representatives of manufacturing industries in KSA. A number of challenges were identified and as a consequence a new *culture-oriented* framework for BPR, as applied in the manufacturing industries in KSA, has been proposed by this thesis.

The developed framework utilizes Six Sigma methodology and employs Holonic modelling, focusing on quality improvements in both *quality of management* (QoM) and *quality of product* (QoP). The framework was tested by a simulated case study of processes used by selected manufacturing industries in KSA, before and after reengineering, is presented and analysed.

Abbreviations

ACA	Accountability Centred Approach
AI	Artificial Intelligence
APL	A Programming Language
BPE	Business Process Engineering
BPR	Business Process Reengineering
BPM	Business Process Management
CAD	Computer Aided Design
CPI	Continues Process Improvement
CIM	Computer integrated Manufacturing
DB	Database File
GPRA	Government Performance and Result ACT
GST	General System Theory
HIS	Holonic Information System
HMS	Holonic Manufacturing System
HO	Hierarchical Organisation
HR	Human Resource
IMS	Intelligent Manufacturing System
IS	Information System
IT	Information Technology
JIT	Just In Time
NOC	Network Operations Centre
NC	National Culture
MAA	Mobile Agent Architecture
MAS	Multi Agent System

RFID	Radio Frequency Identification
MM	Matrix Management
TMF	Teleonic Management Framework
TQM	Total Quality Management
OC	Organisational Culture
QoM	Quality of Management
OMCs	Operation and Maintenance Centres
QoP	Quality of Product
OSS	Operational Support Systems
SABIC	Saudi Arabian Basic Industries Corporation
SIDF	Saudi Industrial Development Fund
PD	Power Distance
IC	Individualism-Collectivism
MF	Masculinity Femininity
UAI	Uncertainty/Avoidance Index
LTO	Long Term Orientation

Related Publications:

Technical discussions and contributions to this thesis have been published in part by the following fully-refereed papers:

1. Rahali, E., 2012, "A Culture Based Framework for BPR Implementation in Saudi Arabia", Proceedings of the 14th International Asia Pacific Conference on Computer Aided System Theory, February, 2012, Sydney, Australia.
2. Rahali, E., Chaczko, Z., Chiu C., and Kohli A.S., 2011, "Evolutionary Architectural Model of Middleware for Construction of an Intelligent Health System", Arab Industrial Information and Networks Conference and its Accompanying Exhibition 20-22 December 2011, (Kingdom of Morocco).
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NOTE: Papers 2 and 3 were published in Arabic but certified English language translations are available.